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Education Information

Doctorate, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (Dr) (Tıp), Turkey 2012 - 2018

Postgraduate, Trakya University, Sağlık Bilimleri Enstitüsü, Biyofizik (YI) (Tezli), Turkey 2010 - 2012

Undergraduate, Trakya University, Fen-Edebiyat Fakültesi, Fizik Pr., Turkey 2005 - 2009

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, İnsülin direnci gelişmiş sıçan kardiyomiyositlerinde sarkolemmal iyon kanallarının fonksiyon ve yapısının elektrofizyolojik ve moleküler biyolojik tekniklerle incelenmesi, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (Dr) (Tıp), 2018

Postgraduate, Meme kanserli hastalarda tedavi öncesi ve sonrası total antioksidan kapasite, eser elementler ve lipit peroksidasyonu, Trakya University, Sağlık Bilimleri Enstitüsü, Biyofizik (YI) (Tezli), 2013

Research Areas

Fundamental Medical Sciences

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The effects of cisplatin and jaceosidin on SH-SY5Y neuroblastoma cells: an electron microscopic, molecular and biochemical study**
BAYRAM P., AKSAK KARAMEŞE S., oezdemir B., DURAK A., BİLLUR D.
ULTRASTRUCTURAL PATHOLOGY, 2023 (SCI-Expanded)
- II. **Liraglutide provides cardioprotection through the recovery of mitochondrial dysfunction and oxidative stress in aging hearts**
DURAK A., TURAN B.
Journal of Physiology and Biochemistry, vol.79, no.2, pp.297-311, 2023 (SCI-Expanded)
- III. **Comparisons of pleiotropic effects of SGLT2 inhibition and GLP-1 agonism on cardiac glucose intolerance in heart dysfunction**

TURAN B., DURAK A., OLĞAR Y., TUNCAY E.

MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.477, no.11, pp.2609-2625, 2022 (SCI-Expanded)

- IV. **STIM1-Orai1 interaction mediated calcium influx activation contributes to cardiac contractility of insulin-resistant rats**
DURAK A., OLĞAR Y., Genc K., TUNCAY E., AKAT F., DEĞİRMENCİ S., Turan B.
BMC CARDIOVASCULAR DISORDERS, vol.22, no.1, 2022 (SCI-Expanded)
- V. **Insulin acts as an atypical KCNQ1/KCNE1-current activator and reverses long QT in insulin-resistant aged rats by accelerating the ventricular action potential repolarization through affecting the beta(3)-adrenergic receptor signaling pathway**
OLĞAR Y., DURAK A., Bitirim C. V., TUNCAY E., Turan B.
JOURNAL OF CELLULAR PHYSIOLOGY, vol.237, no.2, pp.1353-1371, 2022 (SCI-Expanded)
- VI. **Glucagon-like peptide-1 receptor agonist treatment of high carbohydrate intake-induced metabolic syndrome provides pleiotropic effects on cardiac dysfunction through alleviations in electrical and intracellular Ca²⁺ abnormalities and mitochondrial dysfunction**
Durak A., Akkuş E., Gökçay Canpolat A., Tuncay E., Çorapçıoğlu D., Turan B.
CLINICAL AND EXPERIMENTAL PHARMACOLOGY AND PHYSIOLOGY, vol.49, pp.46-59, 2022 (SCI-Expanded)
- VII. **Ticagrelor alleviates high-carbohydrate intake induced altered electrical activity of ventricular cardiomyocytes by regulating sarcoplasmic reticulum-mitochondria miscommunication**
OLĞAR Y., DURAK A., Degirmenci S., TUNCAY E., BİLLUR D., ÖZDEMİR S., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.476, no.10, pp.3827-3844, 2021 (SCI-Expanded)
- VIII. **The Relationship Between Metabolic Syndrome Development and Tissue Trace Elements Status and Inflammatory Markers**
Akdas S., Turan B., DURAK A., ARIBAL AYRAL P., YAZIHAN N.
BIOLOGICAL TRACE ELEMENT RESEARCH, vol.198, no.1, pp.16-24, 2020 (SCI-Expanded)
- IX. **Titin and CK2 alpha are New Intracellular Targets in Acute Insulin Application-Associated Benefits on Electrophysiological Parameters of Left Ventricular Cardiomyocytes From Insulin-Resistant Metabolic Syndrome Rats**
DURAK A., Bitirim C. V., Turan B.
CARDIOVASCULAR DRUGS AND THERAPY, vol.34, no.4, pp.487-501, 2020 (SCI-Expanded)
- X. **Ticagrelor reverses the mitochondrial dysfunction through preventing accumulated autophagosomes-dependent apoptosis and ER stress in insulin-resistant H9c2 myocytes**
OLĞAR Y., TUNCAY E., BİLLUR D., DURAK A., ÖZDEMİR S., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.469, no.1-2, pp.97-107, 2020 (SCI-Expanded)
- XI. **beta(3)-adrenergic receptor activation plays an important role in the depressed myocardial contractility via both elevated levels of cellular free Zn²⁺ and reactive nitrogen species**
TUNCAY E., OLĞAR Y., DURAK A., Degirmenci S., BİTİRİM C. V., Turan B.
JOURNAL OF CELLULAR PHYSIOLOGY, vol.234, no.8, pp.13370-13386, 2019 (SCI-Expanded)
- XII. **Zn²⁺-transporters ZIP7 and ZnT7 play important role in progression of cardiac dysfunction via affecting sarco(endo)plasmic reticulum-mitochondria coupling in hyperglycemic cardiomyocytes**
TUNCAY E., BİTİRİM C. V., OLĞAR Y., DURAK A., Rutter G. A., Turan B.
MITOCHONDRION, vol.44, pp.41-52, 2019 (SCI-Expanded)
- XIII. **A SGLT2 inhibitor dapagliflozin suppresses prolonged ventricular-repolarization through augmentation of mitochondrial function in insulin-resistant metabolic syndrome rats**
DURAK A., OLĞAR Y., Degirmenci S., AKKUŞ E., TUNCAY E., Turan B.
CARDIOVASCULAR DIABETOLOGY, vol.17, 2018 (SCI-Expanded)
- XIV. **Aging related functional and structural changes in the heart and aorta: MitoTEMPO improves aged-cardiovascular performance**
OLĞAR Y., DEĞİRMENCİ S., DURAK A., BİLLUR D., CAN B., KAYKI MUTLU G., Arioglu-Inan E., Turan B.
Experimental Gerontology, vol.110, pp.172-181, 2018 (SCI-Expanded)
- XV. **An Investigation on Molecular Basis of the Effects of SGLT2 Inhibitor Dapagliflozin on Hyperglycemia-Associated Heart Dysfunction***

DURAK A., OLĞAR Y., DEĞİRMENCİ S., Ertürk N., akbaş M. t., aygün a., deniz m. c., erciyas m. f., yazar b. t., yılmaz m. s., et al.

JOURNAL OF CELLULAR PHYSIOLOGY, vol.71, 2018 (SCI-Expanded)

- XVI. **Intermittent hypoxia induces beneficial cardiovascular remodeling in left ventricular function of type 1 diabetic rat**
AKAT F., FIÇICILAR H., DURAK A., TUNCAY E., Dursun A. D., TOPAL ÇELİKKAN F., SABUNCUOĞLU B., Turan B., BAŞTUĞ M.
ANATOLIAN JOURNAL OF CARDIOLOGY, vol.19, no.4, pp.259-266, 2018 (SCI-Expanded)
- XVII. **Increased free Zn²⁺ correlates induction of sarco(endo)plasmic reticulum stress via altered expression levels of Zn²⁺-transporters in heart failure**
OLĞAR Y., DURAK A., TUNCAY E., BİTİRİM C. V., ÖZÇINAR E., İNAN M. B., TOKCAER KESKİN Z., AKÇALI K. C., AKAR A. R., Turan B.
JOURNAL OF CELLULAR AND MOLECULAR MEDICINE, vol.22, no.3, pp.1944-1956, 2018 (SCI-Expanded)
- XVIII. **Cytosolic increased labile Zn²⁺ contributes to arrhythmogenic action potentials in left ventricular cardiomyocytes through protein thiol oxidation and cellular ATP depletion**
DEĞİRMENCİ S., OLĞAR Y., DURAK A., TUNCAY E., Turan B.
JOURNAL OF TRACE ELEMENTS IN MEDICINE AND BIOLOGY, vol.48, pp.202-212, 2018 (SCI-Expanded)
- XIX. **Onset of decreased heart work is correlated with increased heart rate and shortened QT interval in high-carbohydrate fed overweight rats**
DURAK A., OLĞAR Y., TUNCAY E., Karaomerlioglu I., Mutlu G., ARIOĞLU İNAN E., Altan V. M., Turan B.
CANADIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY, vol.95, no.11, pp.1335-1342, 2017 (SCI-Expanded)
- XX. **Hyperglycemia-Induced Changes in ZIP7 and ZnT7 Expression Cause Zn²⁺ Release From the Sarco(endo)plasmic Reticulum and Mediate ER Stress in the Heart**
TUNCAY E., BİTİRİM C. V., DURAK A., Carrat G. R. J., Taylor K. M., Rutter G. A., Turan B.
DIABETES, vol.66, no.5, pp.1346-1358, 2017 (SCI-Expanded)
- XXI. **Interplay Between Cytosolic Free Zn²⁺ and Mitochondrion Morphological Changes in Rat Ventricular Cardiomyocytes**
BİLLUR D., TUNCAY E., Okatan E. N., OLĞAR Y., Durak A., DEĞİRMENCİ S., CAN B., Turan B.
BIOLOGICAL TRACE ELEMENT RESEARCH, vol.174, no.1, pp.177-188, 2016 (SCI-Expanded)
- XXII. **Both Reactive ROS and RNS Contribute to Intracellular Free Zn²⁺ Regulation in Cardiomyocytes Via Zinc Transporter ZIP7 Under Hyperglycemia**
TUNCAY E., Bitirim V., DURAK A., Rutter G. A., Turan B.
FREE RADICAL BIOLOGY AND MEDICINE, vol.100, 2016 (SCI-Expanded)
- XXIII. **Electrophysiological basis of metabolic-syndrome-induced cardiac dysfunction**
Okatan E. N., Durak A., Turan B.
CANADIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY, vol.94, no.10, pp.1064-1073, 2016 (SCI-Expanded)
- XXIV. **Immuno-spin trapping detection of antioxidant/pro-oxidant properties of zinc or selenium on DNA and protein radical formation via hydrogen peroxide**
Deletioğlu V., TUNCAY E., Toy A., Atalay M., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.409, no.1-2, pp.23-31, 2015 (SCI-Expanded)
- XXV. **Beta-blocker timolol alleviates hyperglycemia-induced cardiac damage via inhibition of endoplasmic reticulum stress**
ÇİÇEK F., Toy A., TUNCAY E., CAN B., Turan B.
JOURNAL OF BIOENERGETICS AND BIOMEMBRANES, vol.46, no.5, pp.377-387, 2014 (SCI-Expanded)
- XXVI. **Enhancement of Cellular Antioxidant-Defence Preserves Diastolic Dysfunction via Regulation of Both Diastolic Zn²⁺ and Ca²⁺ and Prevention of RyR2-Leak in Hyperglycemic Cardiomyocytes**
TUNCAY E., Okatan E. N., Toy A., Turan B.
OXIDATIVE MEDICINE AND CELLULAR LONGEVITY, vol.2014, 2014 (SCI-Expanded)

Articles Published in Other Journals

- I. **Investigation of the Effect of the Antiaggregant Agent Ticagrelor on the Electrical and Mechanical Activities of Rat Heart With Type 1 Diabetes**
DURAK A., TUNCAY E., DEĞİRMENCİ S., TURAN B.
Ankara Üniversitesi Tıp Fakültesi Mecmuası, 2021 (Peer-Reviewed Journal)
- II. **Pioglitazonun Metabolik Sendromlu Sıçan Kalp Fonksiyonuna Etkisinin Elektrofizyolojik Yöntemlerle İncelenmesi**
DURAK A., TUTAR SELÇUK M. F., OLĞAR Y., OKATAN E. N., DEĞİRMENCİ S., aksu s., bıçakçı e., bıçakçı e., DOĞAN M., TUNCAY E., et al.
Ankara Üniversitesi Tıp Fakültesi Mecmuası, 2015 (Peer-Reviewed Journal)

Metrics

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H-Index (Scopus): 12